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## The Comb Maker

By WILLIAM B. SPRAGUE

[The capital letters, interspersed through the text, refer to the list of authorities at the end of the article.]

"From deposits, thought to be nine thousand years old, bone combs ornamented with curiously carved animal figures have been unearthed, proving not only the antiquity of the comb but the value placed upon it" (A 1). At various times and places, combs have been made from wood, gold, silver, brass, bronze, japanned iron, lead—which was supposed to turn grey hair to its original color! (A 143)—ivory, tortoise shell, rubber, and probably many other materials, but this discussion will be confined to those which were made by hand in America from the horns of cattle.

"Horn consists almost entirely of animal matter, chiefly membranous—namely, coagulated albumen with a little gelatine, and an inconsiderable portion of phosphate of lime; had the horns much more earth they would be brittle like bones, had they much more gelatine they would be soluble like jelly or glue, as they are constituted, the quantity of gelatine is only sufficient to allow them to be considerably softened by a degree of heat not exceeding that of melted lead. \* \* \* Their gelatine serves as a natural solder, so that neighboring surfaces, when perfectly free from greasy matter, may be permanently joined together by moisture, heat and pressure; the union becomes perfect, but horn being a cheap material, the process of joining it is seldom practised" (H).

The founding of the comb industry in America is generally credited to Enoch Noyes, of West Newbury, Mass., in 1759 (A 15), probably because the business which he established grew to considerable proportions, although there was at least one earlier "horn breaker and comb maker"—Captain Robert Cook, of Needham, Mass., who died in 1756 (A 15).

The preparation of the horn for manufacture into combs, drinking cups and other articles was known as *horn breaking*. After soaking the horn in water for about a month to destroy by putrefaction the membrane



Fig. 1. THE COMB MAKER  
(from Rivington's Trades)

which held the core in place (H), the tip was sawed off (B, G, H.) and then, according to one writer, it was "divided longitudinally on one side with the same instrument" (C). The weight of authority, however, is that, while still in cylindrical form, it was softened by boiling in water for half an hour (H) or in oil (A 18-9) or by roasting it in the flame of a wood (B, E, F, G) or coal (H) fire until it was "nearly as soft as leather." Mention

(Continued on page 171, column 1)

## Roach Traps

By C. CARROLL PALMER

I quote from the *Scientific American* of April 6, 1872: "Among nearly 20,000 specifications, including substitutes, now on file in the U. S. Patent Office, the following is one of the most remarkable and amusing. In this case, a late Commissioner decided that no patent should issue upon a poetical specification which was in other respects entirely sufficient. This specification was written by the inventor, Dr. D. Breed, late of the Patent Office.

### ROACH TRAP

To all those whom it may concern:  
By this description, you may learn  
That I, D. Breed, a District man,  
Have made invention of a plan,  
Both new and useful, of a trap  
For catching roaches while you nap.

In setting forth my new invention,  
Of first importance I would mention  
My trap's a novel earthen cup  
Outside of which the roach creeps up  
And, jumping in to eat molasses  
The well glazed mouth he ne'er  
repasses.

In drawings, figures one and two  
Show simple forms, yet something  
new;

The first has rough outside or way;  
The next, an inclined path at A.  
The central stem (in dots you see),  
Is crowned with bowl like-half a pea,

To hold molasses, say a drop.  
And smoothly glazed from base to top.  
But this is no essential thing;  
Without it, in the roaches spring.  
If, in the bottom of the cup  
You place the sweet whereon they sup.

The figure three shows form unique  
Of which in highest praise I speak;  
'Tis glazed on in and outer sides,  
Except between the handle strides  
Where creep the roaches up a track  
Without a fear of sliding back.

# The Chronicle

In figure four, at B, a spout  
Is made, to wash dead roaches out;  
This form is glazed entire within,  
Also the mouth up to the brim.  
But on the outer side, all around,  
No trace of glazing can be found.

In five and six, a septum, C,  
Cuts full two thirds the cup from  
three.

The smaller part has open door  
At letter D, close to the floor,  
And inclined way to top of cup  
Where Mr. Roach with ease walks up;

Nor needs his wife or child his hand  
To reach the highest brink and stand.  
A little trip in balance hung  
May o'er the mouth of cup be swung;  
But that, an almost useless thing,  
To save expense, away I fling.

Of varied traps, with spiral walk  
And sundry forms, I yet might talk—  
Of clay or other mortar made  
To suit the fancy or the trade;  
Forms now conceived, yet not revealed,  
That sleeping lie in fancy's field.

From this description, you may make  
Whatever form you choose to take,  
From figure one to six, made part  
Of this to aid the potter's art.  
I recommend said figure three  
Of porcelain, like cup for tea.

## CLAIM

As manufacture new, I claim  
Said pottery trap, or porcelain.

If, while you sleep,  
The roaches creep  
Into your sugar bowl,  
And, when you wake,  
They quickly take  
Safe to their hiding hole,  
Before your head,  
Upon your bed,  
Again you lay to nap  
Be sure to get  
And bait and set  
The rhyming roaching trap.  
D. B."

The six drawings that accompanied this poem, printed in the *Scientific American* of April 6, 1872, recalled to mind a pottery roach trap in my possession. A dealer friend has two other examples slightly different in dimensions but evidently molded by pottery works of a limited locality. Two of red and one of grey clay, their origin seems to have been vested in Pennsylvania. Patent records list these five inventions from 1856 to 1871 for roach, roach and bug, also roach and mouse trap. Thomas Williams

of Tompkinsville, N. Y., received two patents: W. J. Webb of Philadelphia, Penna., was awarded one; J. Goodyear, Jr., and T. J. Berry of Philadelphia jointly secured one; and the other inventor was A. N. Shell of Richmond, Va. The patent specifications indicate similar tapered form but list pottery, glass, wood, and metal to form part or all of the vessel.

The Museum of the Bucks County Historical Society at Doylestown, Penna., has a varied collection, principally in red clay in the tapered form, and several with bulbous sides terminating in bases of smaller circumference. The tapered containers measure approximately six inches in diameter at the base. The rough-ringed unglazed sides appear common to all.



ROACH TRAP

The upward climb was thus facilitated for roaches. The hole, round or arched, at the base of some traps must have been plugged during their use by cork or wood which could be removed to wash the interiors. The upper opening in the illustrated trap is about 1½ inches in diameter and is approached by a salt glazed surface tapered downward abruptly to the open cave below.

Molasses is mentioned as a bait for attracting the roaches. The *Scientific American* of May 15, 1875, lists the following formula to destroy roaches: "Put 1 drachm phosphorus into a flask with 2 ozs. water, plunge the flask into hot water, and when the phosphorus has melted, pour the contents of the flask into a mortar with 2 or 3 ozs. of lard. Triturate (grind) briskly, adding water and ½ lb. of flour, with an ounce or two of brown sugar. This paste is said to effectively destroy roaches."

From 1869 to 1900 many patents were granted for the following styles of traps: mouse, rat, insect, vermin,

fly, bed-bug, ant, animal. The mouse and rat traps were usually designed with a spring or trap door arrangement to kill or confine any patrons who sniffed the bait. Many fly traps utilized a flame or light to attract the guests, who seldom left. Other fly traps depended on clockwork-revolved molasses-spread cylinders or blocks to escalate the busy passengers to the confines of screen wire to which they were unwittingly carried. This type set within the sunlit doorway of Wiggins' Country Store at Northampton, Mass., induces folks to stop and marvel at its effective capture of the housefly.

The elimination of insect pests has bothered every nation. In this field of research an article as simple and unmarked as these humble roach traps might be overlooked. The writer would be pleased to hear further about this subject.

## Incorporation

The Early American Industries Association was incorporated as an educational corporation in the State of New York on March 16. The purposes, as stated in the certificate, are practically identical with those which have been regularly carried in THE CHRONICLE. The certificate designates the following to serve as directors until the first annual meeting of the corporation: Charles Rufus Harte and William B. Sprague, both of Connecticut; Charles E. Ayers, Lawrence B. Romaine, Albert B. Wells, and Lewis N. Wiggins, all of Massachusetts; James C. Sawyer, of New Hampshire; Wallace K. Brown, John M. Connor, C. Carroll Palmer, Dr. Carl R. Woodward, all of New Jersey; Dr. Charles C. Adams, Mrs. Theodore L. Bailey, Ledyard Cogswell, Jr., Allen Eaton, J. D. Hatch, Jr., Burton A. Kollmer, James E. Leath, George M. Simmons, Charles Messer Stow, and Alexander J. Wall, all of New York; Edward Durell, of Ohio; Francis D. Brinton, of Pennsylvania; J. Earle Bacon, of Rhode Island; Ralph E. Flanders, of Vermont; Mrs. Pearl P. Niccolls, of Washington. The directors met on March 28 and elected the following officers, who are also to serve until the first annual meeting: Alexander J. Wall, President; Wallace K. Brown, Vice-President; J. D. Hatch, Jr., Secretary and Treasurer.

# Early American Industries Association

## The Comb Maker

(Continued from page 169, column 2)

is made of the risk of "scorching or frizzling" it when the latter method was used (H). When thoroughly soft, it was slit up one side (B, E, G) "with a strong-pointed knife, and opened out by means of two pairs of pincers applied to the edges of the slit" (H).



Fig. 2 (from Hazen's Trades)

"The flats are inserted between iron plates previously heated and greased which are squeezed tight in a kind of horizontal frame or press by means of wedges" (H, see also B, C). This was known as the *wedge press* (Fig. 3) and, in the early comb shop, was "usually merely a huge log of wood, four or five feet long, with a hole mortised in the center," in which the iron plates were placed upright (A 48). "For general purposes, as for combs, the pressure should be moderate, otherwise, in the language of the workman, it *breaks the grain*, and causes the points of the teeth to split; but great pressure is purposely used in the manufacture of the leaves for lanterns, which are afterwards completely separated with a round-pointed knife, scraped and polished. The heat and pressure when applied to the light-colored horn renders it almost transparent" (H). The flats were then plunged into cold water to harden them (B, E, F, G), cut to proper size with a "thin steel saw bow mounted in an iron or wooden handle" (somewhat resembling a modern hack-saw—*Auth.*) and divided into sheets or leaves from one-twelfth to one-quarter of an inch thick, with a "small iron chisel" (F). The wrinkles and flaws were removed with the *guillotine* (Fig. 3) followed by a "knife having two handles, similar to those used by coopers, which he works from him

across the grain of the horn from one end of the intended comb to the other." (B, Fig. 3 "Shave"). The final finish to the plate was given by means of the *Quarnet* (A, Fig. 3) or *quannet* (D, I 1842). This was a sort of coarse rasp, and while using it "the work was mostly placed on the knee as a support" (D). The teeth of the quannet were sometimes "made by pieces of saw teeth inserted into inclined kerfs in a beech stock" (I 1842).

For cutting the teeth, the plate was fastened "by that part meant for the back, into an instrument for holding it called a 'clam' by wedges" (B, G). "the clam has a long handle, which the workman places under him as he sits; by this means he steadies the object of his work, as both hands are to be employed in the operation" (B). The plate was held "at an angle of 45° with the horizon" and the saw was worked horizontally (F).

The saw with which the teeth were cut was the *stadda* (Fig. 4). The blades are shown as (a), an end view of the tool as (b), a side view as (c), and the action of the blades as (e). (d) represents a more unusual form of *stadda*, but Knight does not explain its use. "It has two blades so contrived as to give with ease and exactness the intervals between the teeth of combs, from the coarsest to those which have from 40 to 45 teeth to the inch. The blades or plates of the saw are made

a *lanquid* (*lanquet*, I 598), which is of the thickness of the teeth required in the comb. One blade is in advance of the other from 1/16 to 1/4 of an inch; at the first process a notch nearly of the full depth is made in the comb, and a second notch is commenced; at the next process the notch in advance is deepened, and a third commenced, and so on consecutively. By this means the teeth can be cut in a regular manner, for the very action of cutting out one tooth scores out a place for the saw for the next adjacent tooth." (D, see also I 598). The *stadda* was also called the *gauge-leaf saw* (A 19). Another description of the tooth-cutting process follows, and, while the same general method was pursued, the blades of the saw, instead of "thick steel" as stated above and as illustrated, may sometimes have resembled that of a jig or scroll saw. "The teeth themselves are cut out with a double saw, composed of two thin slips of tempered steel, such as the main-spring of a watch, notched with very fine sharp teeth (*italics ours*). These slips are mounted in a wooden or iron stock or handle, in which they may be placed at different distances to suit the width of the comb teeth. A comb maker, however, well provided in tools, has an assortment of double saws, set at every ordinary width. The two slips of this saw have their teeth in different planes, so that when it be-



Fig. 3. COMB MAKER'S TOOLS  
(from *Comb Making in America*)

of thick steel, and are ground away on the edge as thin as the notches in the comb and they have from 10 to 20 points in the inch of slight pitch. The plates (blades) are fixed in two grooves of the stock by means of the *stuffing*, which consist of two long wooden wedges or folds of brown paper; contact between the blades is prevented by a thin slip of metal, called

gins to cut, the most prominent slip alone acts, and when the teeth of this one have fairly entered into the comb, the other parallel blade begins to saw" (F).

Moreover, another writer, in this connection, speaks of a "double saw, each blade of which is like the small one with which joiners and cabinet makers cut their fine work" (B).



# The Chronicle

In the case of larger combs, it was possible to make two from one plate by means of the *twinning saw*. The plate, by means of clamps, was bent "so as to render the upper surface considerably convex; to this surface the twinning saw is applied by the hand of the workman, who makes a number of incisions; which are completed both ways with two different kinds of saws, and the end of each tooth is cut from the back of the opposite comb with an instrument called a *plugging awl*" (C, see also I 2688), or, as another authority, writing of tortoise shell combs, puts it, "The teeth are cut out with a thin frame saw, while the shell, equal in size to two combs, with their teeth interlaced, is bent like an arch in the direction of the length of the teeth. The shell is then flattened, the points are separated with a narrow chisel or *pricker*" (F, H). The two men pictured at the right in Fig. 2 are apparently performing these operations.

After the teeth were cut, each of them was "square and rough on the inside," so that it was necessary to employ a tool "about the size and shape of a case knife, having teeth like a file on each flat side; after this, two others of the same shape, but each finer cut than the other, follow; one stroke on each side of the comb is then given by a rasping tool, in which also a little attention is used to give the ends of the teeth a small bevel or angle; this tool is used to take off any roughness that may remain on the sides of the teeth" (B). More specifically, the *carlet* (no Fig.), "about an inch wide and ten inches long, bevelled like a clapboard and with teeth on both sides" was used to cut away the teeth at the ends; the *topper* or *pointer*, "a blunter tool" (Fig. 3) finished the points of the teeth; "in making dressing-combs, a curious tool called the *vidder* (no Fig.) was used to scrape away the plate, leaving the back thicker"; and the *graille* or *grile* (Fig. 3) smoothed the sides of the teeth (A 19). Other tools for the same purpose were the *float* and the *found* (D, I 598). Cross-sections of the blades of these tools are shown in Fig. 4, float (f), graille (g), found (h), carlet (i) and topper (j). The double lines indicating the position of the teeth. "The teeth have a forward inclination of about 15° and are made by a file, not a chisel. They are of lower temper than usual and are sharpened by a burnisher" (I 883), of which "the blade is about 2 inches

long, 1 inch wide and 1/6 inch thick; the end is mostly used, and is forcibly rubbed first on the front side of every tooth and then on the back, by which means a slight burr is thrown up on every tooth, somewhat like that on a joiner's scraper" (H). The *bottoming saw* (Fig. 3) with "a very narrow blade with specially cut teeth and a curved handle, rounded and sharpened the spaces between the teeth" (A 58).

The finished combs were polished first with brick dust and then with rotten-stone and vinegar (A 62, C), rotten-stone and oil (B), pumice stone and tripoli (F), or charcoal and water (G), rubbed in with buff leather. Special combs were ornamented with hand engraving and jig-saw work. Almost every description of comb making contains directions for treating the

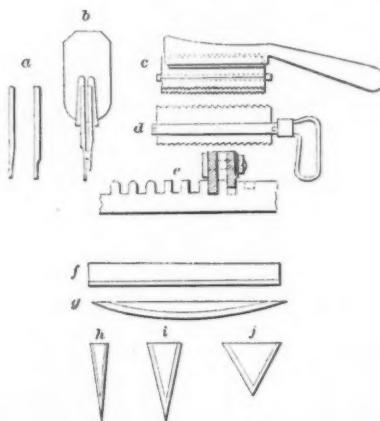


Fig. 4. COMB MAKER'S STADDAS AND FILES  
(from Knight's Dictionary)

horn comb in one or more ways so that it resembled tortoise-shell and might be sold as such. "The poorest and coarsest of paper and tow twine were used for wrapping, and one comb on the outside showed the contents of the package. It was not until about 1835 that boxes came into use for the packing of combs." (A 27).

The first primitive comb making machinery seems to have appeared about 1806 (G) but from then on was constantly elaborated and improved, one of the earliest inventors being David Emory Noyes, a grandson of the founder of the hand industry (A 32).

There are interesting exhibits of early comb makers' equipment at the Robt. A. Spill Comb Shop at Leominster, Mass., and at the Bucks County Historical Society at Doylestown, Penna.

## AUTHORITIES

(A) *Comb Making in America*, Bernard W. Doyle, Leominster, Mass., 1925; (B) *Book of English Trades*, C. & J. Rivington, London, 1827, pp. 89-93; (C) *Panorama of Professions and Trades*, Edward Hazen, Philadelphia, 1837, pp. 80-82; (D) *Cyclopedia of Useful Arts*, Charles Tomlinson, London, 1852, p. 419 (Vol. I); (E) *American Family Encyclopedia*, Webster & Parkes, New York, 1859, p. 1004; (F) *Dictionary of Arts, Manufacturing and Mines*, Andrew Ure, New York, 1850, p. 316, supp. p. 267; (G) *American Artists Manual*, James Cutbush, Philadelphia, 1814, no page numbers, see *Manufacture of Combs*; (H) *Dictionary of Machines, Mechanics, Engine Work and Engineering*, D. Appleton & Co., New York, 1852, pp. 25, 28, 631 (Vol. I); (I) *American Mechanical Dictionary*, Edward H. Knight, New York, 1874.

## Southern Chairmakers

By PAUL LYMAN

Still in existence in the mountains of our Southern States are a few old time chair makers, among them women, who construct their simple but sturdy chairs without the familiar use of nails, screws, wedges, dowels or glue. Their method of making firm joints is probably very ancient and consists of taking advantage of the irresistible force of contraction of drying wood. The posts of the chairs are made of green or very slightly seasoned wood, while the rungs and slats are of seasoned wood. The tenons of the rungs and slats are made with a slight bulge in their center, and as the wood of the posts contracts through drying, are held very firmly. Some workmen make a flat part on one side of the tenon to lessen the possibility of the posts splitting. One maker, when asked how long one of his chairs would last, replied quaintly, "It will last from now on." Several of these craftsmen still use the old spring pole lathe or "lay," as it is sometimes called. This kind of lathe is driven by a flexible wooden pole fastened overhead, to which is secured a rope or strap which passes around the piece to be turned and is connected to a foot treadle below the lathe. The cut is taken on the down stroke of the treadle. Some use a lathe driven by a large wooden drive wheel turned by a helper. Others use only a jack-knife, auger, drawshave and shaving horse.

# Early American Industries Association

## Two Unusual Flax Wheels

By FRANK K. SWAIN

In the interesting article *Homespun* by Miss Ruth Gaines (THE CHRONICLE, No. 17) she names "Lady wheel," "Saxon wheel" and "Priscilla wheel," and asks "What is a Lady wheel?"

When John Donnelley and his mother came to Doylestown from Ireland, about 1850, they brought with them a Castle wheel which she had used in Ireland. It is the only one I ever saw and quite like Fig. 2 in the *Homespun* article. Donnelley said it was the common wheel of Ireland used both in castle and cottages by the lady or the working woman. But he did not know why it was called "Castle" unless because it was high and narrow and built substantially like a castle tower.

Our American wheel, the Priscilla type, is more sprawling, upsets easier, takes up more floor space and is not as graceful as the Castle wheel and when not in use was carried away to another room.

FIG. A

Donnelley said there was another wheel in Ireland, used by ladies only, smaller, lower and nicely turned, upright like a Castle wheel but not exactly the same in other respects. This was used by the lady of the manor who played at spinning and, when not in use, stood in a corner or back of a chair, in a small space, or perhaps on a table.

The wheel here illustrated, now in the possession of Mrs. F. K. Swain, seems to be the nearest approach to that description and was bought at the public sale of Enoch and Alma Fluck, Pleasant Valley, Penna., in 1932. They said it had always been in their family. The distaff holding the flax is made from a tree fork and was added later. The highest upright is carved with a tulip finial and, just below the bulb, is threaded to screw down into the post and through the spindle end. By twisting this screw, one way or the other, the spindle is raised or lowered, thus tightening the band running down to the wheel. The spindle is kept in place at the other end by a string passing over it and attached to a small peg which, when turned twice, winds it to its proper tightness but still allows some play of the spindle. The wheel is 31 inches high to the top of the

tulip and has a leg spread of 11 inches and 17 inches. It has been used a good deal and works like any American wheel. Is this not a Lady wheel and if not where are we?

Miss Gaines further states: "A circumstance that some think might explain the disappearance of the hand-revolved flax wheel in America \* \* \* is that probably there were comparatively few wheels in the colonies during their first hundred years." Comparative to what?

In Vol. 1 of *Records and Files of the Quarterly Courts of Essex County, Mass.*, covering the years 1636 to



Fig. A

1656, twenty-six inventories of estates list wheels for spinning under various names, two of which are for wool as follows — 1647, a woollinge wheele and a Linginge (linen?) wheel. 18 pounds drest hempe. 1656, 1 woolin wheel, 1 pr wool cards.

Some of the flax wheels are listed as follows:

- 1642, 3 chists & a whele, 2 towes comes.
- 1644, One wheel to spin with.
- 1646, 3 wheles & flax in the bun(dle).
- 1646, One lining wheele, one cotton wheele.
- 1646, two wheles & a reele, 1 bundle lynning yarne.
- 1648, thre lining wheles, hemp & flax in the bund.
- 1648, two wheels and linen.
- 1651, Wheelles, yarn & cotten-wool.
- 1652, A linen Wheel.

1653, Four Spinning Wheels.

1654, A lenen wheele, 2 pr cards, hempen yarne & hemp & tow.

1655, thre spinning whealls, a pair of wool cards.

The first mention of a wheel was in 1642 and that was for flax. Eleven years later, in 1653, the first *spinning wheel* is listed, four of them, under that name. Perhaps it is true, as we have been told, that the first wheels were called "great" or "wool" wheels, and "flax" or "linen" wheels and the name "spinning wheel" may have come in with the Saxon or treadle wheel, because Vols. 2 to 8 of the Court Records name them Spinning-wheels after 1653. Could not the hand-turned wheels be converted into treadle wheels and thus lost to collectors? A disused wheel in those days would be a perishable thing anyway.

Should anyone assume that this wheel was a local freak, made by someone to suit their own needs or tastes, I would like to call their attention to *Hobbies*, February, 1942, Page 45, where Mrs. Grace L. Dillard, lecturer and writer, of Michigan, shows an exact duplicate among her antique treasures.

FIG. B

An old man presented Mr. R. P. Hommel with a framed photograph of this wheel but knew nothing about it. The distaff holder is unusual, and the whole outfit is so high that it would seem the spinner would have to stand up to work it, as the pedal is so raised that anyone seated could not reach it easily. The spindle end looks like one on a Dutch or common wheel. The flyer has no hooks for distributing the spun yarn on the spool. There are two grooves on the wheel for two bands but the decorated cross-brace looks as if it would interfere with the bands. The top screw adjusts the bands and the two smaller screws hold the spindle in place. The projection must be greater than it looks because the flyer must revolve. One revolution of this unusually large wheel would mean many revolutions of the spindle and, if the treadle were worked rapidly, it would send the spindle around at a terrific rate — much faster than any Dutch wheel would. The date is 1834 I.B. The frame is mortised and tenoned with two dowel pins in each tenon. It seemed to me it was built for spinning coarse yarn for bags, sacking bottoms or rope yarn, but the spun flax on the spool is as fine as a

# The Chronicle

thread (a magnifying glass shows it). I think its only advantage over any other was its great speed.

Spinning must have died out pretty generally as a household industry soon after this machine was made and this suggests that it is not a type but a freak.

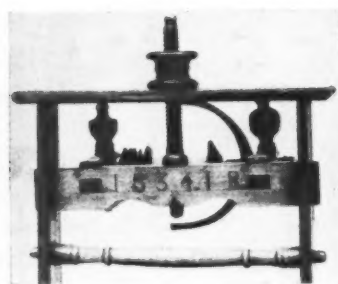
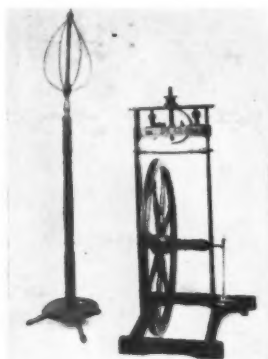


Fig. B. (Lower picture is "close-up" of working parts)

The well turned cross-brace seems out of place with the plain frame. Perhaps the bands touched it or slid over it, hence its round smoothness. It would not seem that anything would be necessary here as a mere brace.

Mr. Hommel did not think the spinner stood but I feel dead sure of it. I. B. evidently was proud of owning this wheel and he may have made it too.



## The Thrill of Research

By ALEXANDER J. WALL

In collecting, our first interest is curiosity about any object which is quaint and odd. Desire to know more about it leads to an endless hunt, each

step of which opens new worlds of thought and action. As we progress and solve each cross-word puzzle, so to speak, we see things which we often have seen before, but which never meant anything to us. Now with increased knowledge we recognize objects and a thrill of joy comes over us and that is the real reward. It does not matter whether we are interested in books, manuscripts, prints or anything else of early American manufacture, the search in whatever field our interest lies gives the same mental reaction as the world of the past reveals itself. And those of us who have searched thoroughly know that soon you are as familiar with your hero or his industry as though you were living in the same period.

Not infrequently you decide that all these notes and observation have cost much time and labor and the world must know about it and the much prized study is published, much to the delight of those of Early American Industries Association's inclination, but usually to the financial loss of the author. Of course, the antique dealer is delighted by such books and his mind is enriched with little effort as he marks up his prices by the knowledge gained as to how rare something he has really is.

For my part, the librarian's heart glows with appreciation of the author's labors, because now he can answer for the first time many questions which previously he could not do, as inquiries were made. I have an everlasting desire to thank all authors and collectors who add to our knowledge on early American industries by the books, magazine articles, and last but not least the antiques pages of the Friday issue of *The Sun*, in the good hands of Mr. and Mrs. Charles Messer Stowe.

To illustrate the thrill of research, I recall many years ago when I was studying New York's fire engines, I wanted so much to get for our museum the earliest engine known. I knew of it only by picture, a small thing which today looks not more than a toy. It was made in 1731 and I did not know that it was in existence. Shortly after my interest began in this quest, I visited a lovely museum in Zurich, Switzerland, and came to a room devoted to their fire department. I was amazed to see the engine with the date 1731, exactly as I knew it and I blurted out, "Why, there is New York's first fire engine! How did it

get here?" The answer, of course, was simple, for I soon learned that the London firm which made and sent to New York its fire engine in 1731 made and sold many of the same type to other parts of the world. But seeing for the first time, even in Switzerland, the engine I was seeking made me stand still and look bewildered. I hope you all have enjoyed similar experiences.

As my life with The New York Historical Society, now in its forty-first year of association, continued like many others, I began to feel that, for the most part, research was rather confined to what might be called, with all respect, "selfish interest" and no effort was being made to spread the knowledge, if possible, and lead others to get some of the joy which the past has for everyone if they will only try to grasp its meaning. Not joy alone, but an educational understanding which will give balanced consideration to every problem which we have in the world today. After all, that is what everyone is and cannot help being interested in,—the world in which he or she lives. Few know, however, how much clearer their point of view can be if they will only look at the past.

We must constantly seek and preach the truth about our democracy, weighing everything the world has done in the light of human endeavor and experiences of human nature. To point out how the history museums and such an organization as the Early American Industries Association may be most useful to the people at large who do think and want to know is my aim. The study of tools and manufacture has been much advanced by collectors, and even by some of the great industries, which sooner or later become conscious of their early beginning and therefore publish a corporation history or produce a motion picture to illustrate their great rise in the world.

Little, however, has been made known about the people or the worker himself and why in America his lot has always been easier to bear by comparison with workers of other nations, owing to a free democracy in which those with ability were free to rise. And it is this side of historical background which needs revealing, first, because it is a remarkable record and, second and more important, the man in the street can understand it, because, in all its industrial phases, it touches everyone. When that happens, the

(Continued on page 176, column 1)



# Early American Industries Association

## Early American Industries Association Inc.

ALEXANDER J. WALL, President, 170  
Central Park West, New York, N.Y.

WALLACE K. BROWN, Vice-President,  
7 Warren Place, Montclair, N. J.

J. D. HATCH, JR., Secretary and Treas-  
urer, 125 Washington Avenue, Al-  
bany, N. Y.

J. EARLE BACON, Chairman Recruiting  
Committee, 113 Keene Street, Provi-  
dence, R. I.

W. B. SPRAGUE, Editor of THE  
CHRONICLE, 43 Cedar Street, New  
York, N. Y.

Communications should be addressed  
as follows: Pertaining to the contents  
of THE CHRONICLE, to Mr. Sprague.  
Suggestions for prospective members  
to Mr. Bacon. Other matters, to Mr.  
Hatch. Addresses as here given.

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135-29 40th Road, Flushing, N. Y.

## Our Purpose

The purpose of the corporation is edu-  
cational, to encourage the study and  
better understanding of early Ameri-  
can industry, in the home, in the shop,  
on the farm, and on the sea, and es-  
pecially to discover, identify, classify,  
preserve and exhibit obsolete tools,  
implements, utensils, instruments, vehi-  
cles, appliances and mechanical devices  
used by American craftsmen, farmers,  
housewives, mariners, professional men  
and other workers.

## Dues

The annual dues are payable Janu-  
ary 1st, and are as follows: Regular  
members, \$1.00; Contributing mem-  
bers, \$2.00; Supporting members, \$5.00;  
Sustaining members, \$10.00 and up.  
There is no distinction between the  
classes, except the amount of dues,  
but the publication of THE CHRONICLE  
cannot be financed unless a consider-  
able number of the members pay more  
than \$1.00. Each member is expected  
to voluntarily place himself in the class  
which represents the amount he is will-  
ing to contribute to the support of the  
Association for the current year. Life  
membership costs \$50.00. THE CHRON-  
ICLE is sent to all members with-  
out additional charge. Many of the  
back numbers may be secured from the  
Treasurer for from 20c up, according  
to the supply on hand, and a twelve-  
page index to the twenty-four numbers  
of Volume I, containing a useful bibli-  
ography, for \$1.00 each. For further  
information, address any of the officers.

## Washing Machines

By J. EARLE BACON

Presumably, in the very long ago,  
clothes were made of the hide of a  
platypus or other animal. Possibly  
they were never cleaned—or maybe  
once a year, as is said to be the prac-  
tice in Arctic localities. If they were  
ever cleaned, it is probable that one  
wet cuff was rubbed against another  
and then saturated with grease of the  
wild hog of those days to prevent the  
skin from hardening. When cloth was  
produced some three thousand years  
ago or more, it is probable that the  
washing was taken to a running brook,  
slathered with some sort of home-  
made soap and then beaten with a big  
wooden paddle on a flat rock; at least  
that is how the French women did it,  
and they have ever had the reputation  
of being skilled laundresses. The wet  
clothes were then spread on the grass  
to dry and bleach. (Should you follow  
their example of spreading on the  
grass, beware of the early Fall grass-  
hoppers! They simply dote on wool-  
ens and it was the writer's experience  
to have a new bathing-suit riddled in  
one day.)

Early New Englanders used similar  
methods. They first boiled the "wash"  
in soap-suds in the big outdoor kettle.  
Some crudely-cast ones were of very  
large capacity and weighed five hun-  
dred pounds. (They were a practical  
necessity and every farmer had one,—  
indeed, most villagers. Lye was boiled  
in them, soft soap made, stock-feed  
compounded, maple sap evaporated,  
apple-butter "biled up," and the clam-  
chowder for "town doings" was made  
in them.) The kettle's contents of  
boiled clothes was transferred to a  
heavily coopered barrel and pounded  
with a heavy pestle. This had a four-  
foot handle attached to a bowl-shaped  
pounding-head, similar in shape to a  
modern rubber suction plumbing forc-  
er. A circle of holes around this hol-  
low gadget allowed suds to be alter-  
nately drawn in and forced out, cre-  
ating suction. When a chap could not  
afford a nice lignum-vitae one he made  
his own from the top of a jug. When  
you have a free day, try boring holes  
in a jug with a hand drill and facing  
the bottom of a jug-top on a grind-  
stone. There were no electric carbo-  
rundum grinders in those days; a boy  
turned the hand-made stone by hand.  
An early demand was manifest for  
some device to lessen the dreary labor

of hand-scrubbing. The *American  
Encyclopedia* of 1824 comments as  
follows: "American Yankee ingenuity  
would seem to have exhausted itself  
in the making of washing machines.  
The more complicated they are the  
more attractive they are supposed to  
be as labor-saving inventions." We  
wonder what the writer of that para-  
graph would have to say of the mod-  
ern electric home laundry that empties  
the wash water, rinses in three clean  
waters and finally dries the wet gar-  
ments by centrifugal force. The ad-  
vertisements say that a housewife may  
start the washer, play bridge all the  
afternoon and find the washing ready  
for the electric mangle on her return  
home. Some of the present washers  
have quite patently copied the princi-  
ples of those produced well over a  
hundred years ago. The first ones tried  
to reproduce the scrubbing idea with  
mechanical hand-power added, so that  
a child might relieve Mother. Most  
of them had two rubbing-boards, one  
fixed in the bottom of a tank and the  
other a heavy plank with rubbing sur-  
face on its under side. This latter  
rested on the clothes and either slid  
backward and forward or was circular  
in shape and rotated. It replaced the  
feminine fist as a rubbing force and  
was actuated by various sorts of gear  
and crank devices. One of them on  
exhibition at the South County Mu-  
seum has an arc-shaped lower board  
with a wooden roller above it having  
longitudinal wooden teeth. This kept  
the hands above the washing and saved  
wear and tear of the knuckles. It also  
has a comical device, namely, a crude  
pump which squirts soft soap on the  
clothes as it operates. Another one of  
*circa* 1860 has a circular wooden disk  
with large wooden pegs projecting  
downwards from its under surface. As  
this revolved by means of a lever and  
gear arrangement, it swashed the gar-  
ments to and fro like a well known  
make of electric washer.

Wringers also engaged the attention  
of the early Yankee inventors. Some  
had two wooden rollers, some three of  
different sizes, and some as many as  
five, assembled in many different ways.  
One has a long canvas bag with a  
slot in its side, like the laundry bags  
that hang on our cupboard doors. The  
washed clothes were stuffed into it  
and, when the gearing was connected,  
one end stayed fixed and the other was  
twisted, thus wringing exactly as one  
would wring a wet dish-towel by hand.

# The Chronicle

## Research

(Continued from page 174, column 3)

museum collections take on life and interest and it is our job to make it so. This Association, along with many similar organizations the world over, have this record of the past in books, manuscripts, and relic material, but it has always been the few who have used it. In the last twenty years and particularly right now, the interest of many has developed and, if we make intelligent use of that interest, our educational value becomes paramount in every question of policy in today's world.

May I therefore point out to you the real work we have ahead in our Association, which includes research into the lives of the industrial workers, the conditions under which they lived in America, the compensations they received and the endless chain of those who have started at the bottom to rise to the leadership in so many fields, because it was possible under American democracy. When such data has been compiled and the results published, we shall have a much better story to tell about our relics, one which almost everyone can understand, and I hope achieve a better balanced mind.

## Maine Butter Molds

By GARRET HYNSON

Indigenous New England feeling for design and skill in carving show clearly in work on butter molds. In form, New England molds are similar to those of New Jersey, Pennsylvania, New York, and Ohio. Flat disks carved by hand were succeeded by turned disks with handles issuing from the back, and about 1850 the disk and handle acquire a box or turned skirt and become plunger molds. New England designs are, however, distinct. They show a tendency toward informal naturalism and asymmetry. When the same fruit or flower is repeated, it is clear that the carving is spontaneous each time, is not copied with any care, and the designs show an eccentric movement in which one design unit does not flow smoothly into the next unit. The New England butter mold carver frequently used his parting tool to "peck" at the wood. His spacing in a circle was uncertain and haphazard.

Page 176

Two molds recently purchased in Norway, Maine, by Sidney Stewart of Needham, Massachusetts, present an unusually interesting problem. Geometric and superficially resembling "Pennsylvania Dutch" molds, the New England characteristics are still to be found and a close comparison with Pennsylvania molds does not bear out the resemblance. Fig. 1 looks like a crude sketch for Fig. 2. It is carved in pine, has a hole in the back for a handle, and shows on its face a star-shaped pattern of six veined leaves. In five of the spaces between the leaves, is a three-branched flower form rising from a single stem. In the sixth



Fig. 1



Fig. 2



Fig. 3

space is a crude hand, possibly indicating that the carver or owner or both, was named Hand. The border is dentilated.

The other mold (Figs. 2 and 3) with a handle on the side is carved on both sides of the disk and handle. The disk is not a true circle; the wood is maple. The star pattern of the first mold is repeated without veining. The dentilation is finer, and the three-branched flower has become a chevron. The reverse shows a pinwheel of four veined leaves or plumes, with dentilated border and space filling curves that are slightly irregular. The handle has a delicate asymmetrical pattern of willow branches on both sides, on one side filling the space very successfully,

on the other side succeeding not so well.

The dentilation and veining of leaves is common to all butter molds of the period, on the continent as well as in the United States. The flow of heraldic curves usually found in Pennsylvania molds is missing here; particularly in the "Hubbard Squash" arms of the pinwheel in Fig. 3, where the eccentric movement of New England, rather than the baroque flow of Pennsylvania, is apparent. The space-filling curves repeat this strange movement without flow, and the carving of the handle shows the New England zest for naturalism, uncertain handling of space and low, crabbed artistry combined with intuitive poetic feeling.



# Early American Industries Association

## Membership

Membership lists should be amended as follows: (N) indicates new member; (S) indicates non-member subscriber; (Ch) indicates change of address; (D) indicates decease; (R) indicates resignation; (Co) indicates correction.

### CALIFORNIA

Hollywood: Rollins, Miss Alice R. (1267), 342 N. Kings Rd. (N)

### CONNECTICUT

Ridgefield: Curry, Douglas (R)  
Riverside: Armstrong, George S. (Ch)

### MAINE

South Portland: Weeks, George H. (1257), 14 C St. (N)

### MASSACHUSETTS

Boston: Fraprie, Frank R. (1333), 353 Newbury St. (N)  
Shrewsbury: Childs, Mr. and Mrs. John E., 143 Grafton Pl. (Ch)

### NEW HAMPSHIRE

New Boston: Jackson, Mr. and Mrs. Alton B. (Ch)

### NEW JERSEY

Arlington: Sakelos, Miss Diana (1365), 28 Elizabeth Ave. (N)  
Closter: Saunders, Mrs. A. (734) (D)  
Newark: Biddolph, Howard, 768 Broad St. (Ch)  
Princeton: Laughlin, Ledlie I., Drake's Corner Rd. (Ch.)

### NEW YORK

Brooklyn: Dashiell, Mrs. John (R).  
Hamilton: Colgate University Library (1262), (S)  
Hempstead: Rispin, Miss Ethel, 10 Washington St. (Ch)  
Ithaca: Allanson, C. A., 321 N. Albany St. (Ch)  
New York: Brooks, Mrs. Harlow (510), (D); Corby, Dr. A. E. (R); Parker, Dr. H. W., 20 W. 44th St. (Ch); Stephens, Miss Jane (R).

### NORTH CAROLINA

Raleigh: North Carolina Historical Association Commission (1374), Box 181 (S)

### PENNSYLVANIA

Parkburg: Sahlin, R. C. (1266), (N)  
Solebury: Hawkins, Dr. John A. (R)  
Swarthmore: Davison, Mrs. Waldo B. (1255), 730 Howard Ave. (N)  
West Chester: Chester County Historical Society (1268), (S); Cope, George B. (R)

### RHODE ISLAND

Kingston: Woodward, Dr. Carl R. (Ch)  
Peacedale: Campbell, Wallace (Ch)

### VERMONT

Bellows Falls: Lamb, Harold G. (1256), (N)  
Manchester: Ineson, Stanley B. (Ch)

## The Questionnaire

Questionnaires recently received have been tabulated as follows. For key to abbreviations, see page 7 or the Directory of Collectors, Dealers and Museums which will be circulated with this issue.

### CONNECTICUT

Wallingford: Mr. and Mrs. Charles F. Montgomery, Cook Hill (C and D). Collect and deal in HD, KL, LD, TC. Want LP. Write \*. Visit.

### MASSACHUSETTS

Springfield: John D. Pond, State and Andrew Streets. Specializes in publishing books on early American arts and crafts.

### NEW YORK

New York: Otto L. Bettman, 215 E. 57th St. (C and D). Collects and deals in literature and pictures pertaining to early American industry. Write \*. Visit.

### From Miss Ruth Gaines:

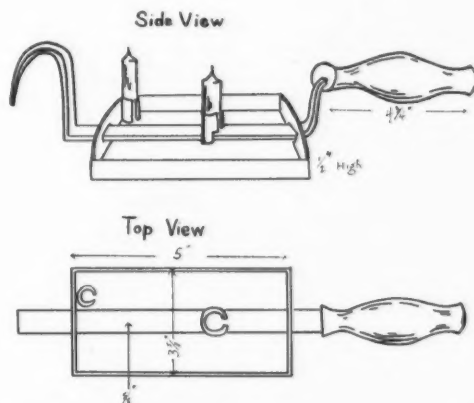
"I was much interested in Mr. Brainard's comments in the December issue on the flax wheel, method of construction, etc. The only exception to his statements that I know of is the unique little wheel pictured last in my article. This has solid wheels. About names and initials: I have since heard from several people, and seen several wheels quite professionally marked with names or initials; and I too believe these must have been makers' marks. I have hoped to get time to consult some early newspaper files for advertisements on this point. At the same time, I do believe private and somewhat cruder markings denoted ownership—particularly as many of the wheels were home-made. There

are advertisements of 'spinning-wheel irons' for sale—a blacksmith's job, of course; and perhaps (as I have been told) the wheels themselves (i.e., the drive-wheels) came from a similar professional source, as also the fliers—or, as I found them—blanks for the wooden parts. Our home folks were pretty skilled in tools and lathe turning, as I know from the house I live in, built by the farmer from the pines he felled.

About Canada, especially Quebec, I had the same idea as Mr. Brainard. I had heard of a wheel factory actually turning out wheels, and I had seen in antique shops hereabouts some clean, fresh wheels that I concluded had come down from thereabouts. Then, too, the Pepperel Yarn Company within a few years has advertised new spinning wheels for sale. So I went up to Quebec last fall. The factory had folded up; the old wheels in the homes were for sale, and everyone was rejoicing in electrical spinners (such as you attach to your sewing machine), machine linen-knitters, and all the progress of the times. It may be that further east in Canada the wheel keeps its place; and probably specific information can be got from the Pepperel concern. I will try for that."

Mr. Douglas Curry has sent us sketches of a most unusual—if not unique—candle-holder in his possession. It is of wrought iron, except the wooden handle. One candle-socket slides along the center bar from end to end; the other is fixed in place. The oblong pan is of quite heavy metal,

probably 1/16 of an inch thick and the sides are formed by turning up the edges of the same piece. Each of the sockets has an opening at the side, presumably to facilitate the removal of the candle stump. Any suggestions as to the special use of this strange article will be welcomed.



## COMMUNICATIONS

From Mr. J. EARLE BACON:

"In early days meat was not skilfully aged or tendered and had to be thoroughly chewed. Also breakfast foods were neither denatured nor blown up, the oats and kernels of corn were ground with the hulls on and the vitamins did not escape. The rugged life of those times, plus necessary chewing, made for healthier teeth and many adults of over fifty had no vacant spaces nor any fillings. Dentists were almost non-existent before the first years of the nineteenth century. About that time itinerant tooth-cobblers began to travel about the rural districts to clumsily repair buccal molars. Even then, few villages boasted a dentist so that resort was had to amateurs. The "turnkey" tooth-puller looks almost exactly like a miniature cant-hook or peavy, which is used by lumbermen to roll and haul logs. The butchers and the blacksmiths frequently had them hanging in their shops and when a good favored customer came in with a toothache, they said, 'Well, well, Bill! Lie down on the floor and let me git my knee on yer chest and my left hand on your forehead.' A quick, strong twist and out it came. Then the operator said, 'Oh, no, no! No thanks, glad to do it fur yer, no charge.' An elderly lady, now living, recalls her grandfather's story of an incident in a country store in a small town in Rhode Island. One of the roving dentists entered the store and hung about all day, as he did when his trip took him to that town. He inquired if any of the customers needed an extraction. One admitted that he had one or two teeth that he reckoned would be better out and inquired the price. The dictum was fifty cents for every one yanked. He said, 'Outrageous! Why, mister, I've been hauled all over this floor for twenty-five cents.' Medical doctors carried turn-keys in their 'tool-kits' and the standard charge was twenty-five cents for extraction."

Miss M. H. Jewell has found the following names of makers of daguerreotype miniatures in Boston directories from 1842 to 1847 inclusive: Abel, Henry L., Adams, J. S., Bowdoin, D. W., Brooks, N., Campbell & Davis, Cannon, J., Charter, Miss S. R., Chase, Lorenzo G., Crosby, Robert R., Foss, Plummer, Hale, C. E., Le-row & Co., Litch, Albert, Litch, Whipple & Co., Long, H. H., Lovering &

Davis, Nye, Alexander G., Ormsbee, M., Plumble, J., Robinson, E. P., Saben, P., Shew, M., Smith, E. A., Southworth, A. S., Southworth & Co., Southworth & Hawes, Whipple, J. A., White, Asa. Miss Jewell also sends in the following advertisement which appeared in the directory for 1857:

### "GALLERY OF ART 10 TREMONT ROW

A new style of Pictures is being made at this establishment called

#### PHOTOGRAPHIC PAINTINGS

By this process portraits are made on canvas or paper, from the smallest miniature to cabinet or life size, and colored in Oil, Pastil or Water Colors. Having resided in Paris the past year, we have been enabled to obtain some of the most talented artists of Europe as our *attaches*, and having also the most convenient as well as the most elegant establishment in the country, we feel confident that with these advantages, and the advantage also of being the first in this country to practise the beautiful art of Portraiture, we can please the most fastidious.

The Photograph is made life size, or any size which may be desired with one sitting, directly upon canvas or paper,—if colored in oil, upon canvas; if in pastil or water colors, upon paper; and with one more short sitting for the colors, we are enabled to produce the most highly finished and lifelike pictures.

Daguerreotypes of deceased persons may be copied and enlarged to the cabinet or life size and colored, in either of the above named styles, and perfect satisfaction guaranteed.

AMBROTYPES AND DAGUERREOTYPES executed at this establishment in the most artistic manner. Mr. Cutting, the senior partner, being the inventor and patentee of the Ambrotype.

The exhibition rooms open free to the public from 8 A.M. to 8 P.M. The public are respectfully invited to call and examine this new style of picture.

CUTTING & TURNER"

Mr. George W. Price has contributed a reproduction of an advertisement by one Z. Goodridge, which appeared in *The Wizard*, South Danvers, Mass., in July, 1860, offering a product called "granular fuel," which Mr. Goodridge described as "simply small trees, limbs, and twigs, of hard wood—mostly oak—ground up by machin-

ery in lengths from 3 to 5 inches, and thoroughly dried." He claimed that, while a novelty in that vicinity, it had, in other localities, been "permanently adopted as the cheapest, neatest and handiest fuel in the market for light fires and kindling purposes—almost entirely superseding charcoal." He had 25,000 bushels on hand to sell at ten cents per bushel. The advertisement includes a picture of the machine which ground up the wood, somewhat resembling the farmers' feed-cutter, but the detail is not sufficiently clear to warrant reproduction here. [Can anyone supply any further information about "granular fuel"? Ed.]

From Mr. CHARLES MESSER STOWE:

"It is gratifying to members of the Early American Industries Association when the organization or *THE CHRONICLE* gets the recognition they know belong to either. Here is an instance: In the weekly edition of *The Times* of London for December 10th, 1941, an article headed *The Fabrication of Fine Linen*, to which *The Times* gives two columns, contains under the sub-head *Spinning Wheels in America* reference to an article in *The Chronicle of the Early American Industries Association* by Miss Ruth Gaines, with a liberal quotation. The American trade magazine *Linens and Domestic* also pays attention to *THE CHRONICLE*. I learn, and doubtless many other organs of various industries follow it."

Mr. C. E. H. Whitlock sends us a sketch of a flat brush, rectangular with rounded corners, about nine inches long, two and one-half inches wide and two inches thick, including the bristles. It is inscribed with the word "Pure" in large italics, taking up the entire length and width of the back. Can anyone furnish any information about it?

From Mr. R. P. HOMMEL:

"Here is a note of interest for the tobacco twisting, relative to the machine illustrated in the last issue. In the records of indentured servants and apprentices kept by the Mayor of Philadelphia in colonial times I found the following: Christian Golley of Philadelphia on June 7th 1773 took as servant for four years Peter Capes, to be employed as a 'tabaces spinner.'"

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